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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

QI, ZHI QIANG

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/838,384

Applicant(s)

CHA ET AL. 

Examiner

Mike Qi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and expressly the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15, 17-21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,292,239 (Nagamura et al) in view of JP 11-133401 (Susumu et al).

Claim 1, Nagamura discloses (col.7, line 11 – col.8, line 67; Fig.1-13) that a liquid crystal display having back light unit (BU), and the back light unit (BU) including a light source (4) for generating a light, a light guide (the photo conductive plate 8) installed at a side of the light source (4) so as to uniformly radiate the light generated from the light source (4) <sup>LCD</sup> into the display unit and a light focusing means (lens sheets 5, 6 and diffusion plate 7) installed above the light guide (8) so as to focus the light transferred through the light guiding plate (8) to a surface of the display panel (2); and the resin frame (3) having a first frame (a liquid crystal panel containing frame 17) and a second frame (a back light component containing frame 10).

Nagamura does not expressly disclose the mold frame having a same structure as the application claimed, i.e., the first frame for receiving the display unit, the light guide plate and the light focusing means, and the second frame for receiving the light source.

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However, Susumu discloses (Figs.1-6) that a liquid crystal display device using two frames, one frame (first frame) is used for receiving the display unit such as the display panel (10), the light guiding plate (26) and the light focusing means (the optical films 28,30), another frame (lamp frame) is used for receiving the light source (31). Therefore, the light source (31) would be easily detachable and be easily substituted.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to use such two frames as claimed in claim 1 for achieving easily exchanging the light source.

Claim 2, Nagamura discloses (col.8, lines 42-47, Fig.1-2) that the light source (lamp 4) for radiating light is held by a holder holding portions (13a, 13b) to hold the rubber holders (15), i.e., the lamp supporting member to be inserted into both ends of the lamp so as to support the lamp, inherently, that must have electrical cable to connect the lamp and the power control circuit.

Claim 3, Nagamura discloses (Col.7, lines 14-24, Fig.1) that a reflection plate (9) installed below the light guiding plate (photoconductive plate 8) so as to reflect the light incident from the light guide plate (8) towards the display unit (display panel 2).

Claims 10 and 4-5, Susumu discloses (Figs. 1-6) that the first frame for receiving the display unit such as the display panel (10); and the first frame including a bottom surface and side walls vertically formed at all side peripheral portions of the bottom surface but one side peripheral portion of the bottom surface; and a supporting member (38) installed at the open side peripheral portion of the bottom surface to support the lamp frame; and the lamp frame for receiving the light source unit (31), and the lamp

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frame is detachably coupled to the open side peripheral portion of the bottom surface of the first frame; and the supporting member (38) in the first frame including a fixing member (42) and the lamp frame has a second fixing member (52) detachably coupled to the first fixing member (42). Such that the light source (31) would be easily detached and be easily substituted.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to arrange a first frame and a second frame as claimed in the claims 10 and 4-5 for achieving easily exchanging the light source.

Claims 6-8, 18-20, Susumu discloses (Figs. 1-6) that the second frame (lamp frame) having the first groove (lamp groove) for receiving the light source (32) to generate lights and the second groove (cable groove) for receiving the electrical cable (60a) to connect the power circuit, and formed in the length direction, and the light source groove having rectangular sectional shape. Concerning the cover portion, bottom portion and side portion of the lamp groove would have been an obvious variation to arrange one side open or two sides open to design the second frame (lamp frame) efficiently generating lights. Therefore, it would have been obvious to those skilled in the art at the time the invention was made to design grooves as claimed in the claims 6-8 and 18-20 for achieving efficiently using the frame and generating the lights.

Claims 9 and 21, Nagamura discloses (Fig. 1) that a reflection plate (9) is provided below the light guiding plate (8) and Susumu discloses (Figs. 1-6) that a reflection plate (40) is extended to the lower portion of the light source (32) and a reflector (47) is installed in the lamp groove. Concerning the reflector is installed in the

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cover portion, the bottom portion and the side portion of the lamp groove would have been an obvious variation for achieving efficiently generating lights, more reflector would produce more light reflection, and that would have been at least obvious.

Claims 11-13 and 17, Nagamura discloses (Figs. 3-4) that each sidewall has stepped portion formed towards the bottom surface of the display panel. Susumu also discloses (Figs. 1-6) that the lamp frame has stepped portion formed towards a bottom surface of the lamp frame so as to fit into the supporting member (38) of the first frame, and the supporting member (38) of the first frame is used for supporting the lamp frame and the both ends of the supporting member (38) are vertically bent and extended towards the side wall position in perpendicular to the supporting member (38), and that would have been at least obvious for a good engaging installation.

Claims 14-15 and 23-25, Susumu discloses (Fig. 5) that a first fixing part (42) is integrally formed at an upper portion of the supporting member (38) so as to fix the lamp frame to the upper portion of the supporting member (38), and the lamp frame having a second fixing part (52) is integrally formed in the lamp frame at the position below the cable groove (48) so as to engage the lamp frame with the first frame, and that would have been at least obvious to engage the two frames together.

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagamura and Sumumu as applied to claims 1-15, 17-21 and 23-25 above, and further in view of US 5,815,227 (Lee).

Claim 16, concerning the first fixing part has a fixing projection protruded at the

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upper portion of the supporting member and a coupling hole perforating the fixing projection that would have been an obvious variation for engaging the two frames. There are a lot of products in the common market using the structure in which the frames have a fixing projection and a coupling hole for engaging two frames. The reference Lee is an example (col.3, lines 11-16, Fig.4) using a locking protrusion (a) and a locking hole (a') for engaging the lamp cover (125) and the light inducing plate (105). Therefore, the engaging structure using a fixing projection and a coupling hole as claimed in the claim 16 would have been at least obvious variation.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagamura and Sumumu as applied to claims 1-15, 17-21 and 23-25 above, and further in view of US 5,818,555 (Yokoyama et al).

Claim 22, it was common and known in the art using a high reflectivity material such as polyethylene terephthalate as a reflector. The reference Yokoyama is an example (col.20, lines 10-14) that the sheets made of a polyethylene terephthalate have 90% more high reflectivity. Therefore, it would have been obvious to those skilled in the art at the time the invention was made to use polyethylene terephthalate material as the reflector for achieving a high reflectivity.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (703) 308-6213.

The examiner can normally be reached on 349.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7721 for regular communications and (703) 308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Mike Qi  
September 17, 2002



TOANTON  
PRIMARY EXAMINER